

In re Patent Application of
OLOFSSON ET AL.
Serial No. 09/582,637
Filed: OCTOBER 20, 2000

In the Claims:

This listing of claims replaces all prior versions
and listing of claims in the application.

Claims 1-33 (canceled).

① 34. (Currently amended) An active POTS splitter for use in a telecommunications system using xDSL and POTS and including at least one central office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, the active POTS splitter comprising:

active splitter circuitry to be connected to a subscriber line, at the subscriber's premises, for separating analog POTS signals from xDSL signals; and

line test circuitry associated with said active splitter circuitry for transmitting, at the subscriber's premises, a test signal for measuring quality parameters relating to xDSL transmission on the subscriber line, said line test circuitry transmitting the test signal based upon at least one of an event and receipt of a test request signal, said line test circuitry having associated therewith a unique identity code transmitted with the test signal.

35. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal is for a specific line test.

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36. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal is in a general form for use with a range of different line tests.

37. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one pulse.

38. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one step.

39. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises at least one chirp.

40. (Previously presented) An active POTS splitter according to Claim 34 wherein the test signal comprises a series of sinusoidal signals of predetermined amplitude, each sinusoidal signal having a different frequency and the series thereof spanning a frequency range for which the line is to be tested.

41. (Previously presented) An active POTS splitter according to Claim 40 wherein each sinusoidal signal has a predetermined duration to facilitate synchronization and measurement.

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42. (Previously presented) An active POTS splitter according to Claim 34 wherein the event is according to a predetermined schedule.

43. (Previously presented) An active POTS splitter according to Claim 34 wherein the line test signal comprises a short-circuiting of the subscriber line.

44. (Previously presented) An active POTS splitter according to Claim 34 wherein said splitter circuitry and said line test circuitry are implemented as a single integrated circuit.

45. (Previously presented) An active POTS splitter according to Claim 44 further comprising:
a printed circuit board mounting said single integrated circuit; and
a line jack connected to said printed circuit board for insertion into a customer premises line socket.

46. (Previously presented) In a telecommunications system using xDSL and POTS and comprising at least one central office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, a method of measuring quality parameters relating to xDSL transmission on a subscriber line and comprising:

using an active POTS splitter including line test circuitry for generating a test signal on the subscriber line

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from a subscriber's premises based upon at least one of an event and receipt of a test request signal, and transmitting a unique identity code with the test signal;

performing measurements at the at least one central office on the test signal; and

deriving quality parameters for the subscriber line from the measurements.

47. (Previously presented) A method according to Claim 46 wherein the event comprises the subscriber line changing from a high impedance state to a low impedance state.

48. (Previously presented) A method as claimed in Claim 46 wherein the event comprises a telephone switching from an on-hook state to an off-hook state.

49. (Previously presented) In a telecommunications system using xDSL and POTS and comprising at least one central office connected to a plurality of subscribers by subscriber lines extending to each subscriber's premises, a method of measuring quality parameters relating to xDSL transmission on a subscriber line and comprising:

using an active POTS splitter including line test circuitry for generating a test signal on the subscriber line from a subscriber's premises based upon receipt of a test request signal, and for transmitting a unique identity code based upon at least one of receipt of a test request signal and receipt of an identification request signal;

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performing measurements at the at least one central
office on the test signal; and

deriving quality parameters for the subscriber line
from the measurements.

50. (Previously presented) A method according to
Claim 49 wherein the test signal is for performance of a
specific line test.

51. (Previously presented) A method according to
Claim 49 wherein the test signal is of a general form for use
with a range of different line tests.

52. (Previously presented) A method according to
Claim 49 wherein the test signal comprises at least one pulse.

53. (Previously presented) A method according to
Claim 49 wherein the test signal comprises at least one step.

54. (Previously presented) A method according to
Claim 49 wherein the test signal comprises at least one chirp.

55. (Previously presented) A method according to
Claim 49 wherein the test signal comprises a series of
sinusoidal signals of predetermined amplitude, each sinusoidal
signal having a different frequency and the series thereof
spanning a frequency range for which the line is to be tested.

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56. (Previously presented) A method according to Claim 55 wherein each sinusoidal signal has a predetermined duration to facilitate synchronization and measurement.

57. (Previously presented) A method according to Claim 49 wherein the test signal is transmitted a predetermined time after receiving the test request signal.

58. (Previously presented) A method according to Claim 46 wherein the event comprises a predetermined schedule.

59. (Previously presented) A method according to Claim 49 further comprising transmitting the unique identity code based upon receiving an identification request signal.

60. (Previously presented) A method according to Claim 49 wherein the event comprises short-circuiting of the subscriber line.

61. (Previously presented) A method according to Claim 49 further comprising collecting and storing results obtained from line tests at the at least one central office and deriving a log of line conditions for each subscriber line therefrom.

62. (Previously presented) A method according to Claim 49 further comprising collecting and storing a plurality of results obtained from line tests at the at least one

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central office and averaging the plurality of results to obtain a composite result for each subscriber line.

63. (Currently amended) A telecommunications system ~~adapted to employ~~ using POTS and xDSL, comprising at least one central office connected to a plurality of subscriber premises by subscriber lines extending to respective subscriber premises, at least one of the subscriber premises having an active POTS splitter locating therein, the active POTS splitter comprising:

active splitter circuitry to be connected to a subscriber line, at the subscriber's premises, for separating analog POTS signals from xDSL signals; and

line test circuitry associated with said active splitter circuitry for transmitting, at the subscriber's premises, a test signal for measuring quality parameters relating to xDSL transmission on the subscriber line, said line test circuitry transmitting the test signal based upon at least one of an event and receipt of a test request signal, said line test circuitry having associated therewith a unique identity code transmitted with the test signal.